



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------------|---------------------|------------------|
| 09/995,028 | 11/26/2001 | Chandrasekharan Seetharaman | BEA920010028US1 | 9618 |

30011 7590 09/07/2005

LIEBERMAN & BRANDSDORFER, LLC
12221 MCDONALD CHAPEL DRIVE
GAITHERSBURG, MD 20878

| |
|----------|
| EXAMINER |
|----------|

SCUDERJ, PHILIP S

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2153

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------|--------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/995,028 | SEETHARAMAN ET AL. | |
| | Examiner | Art Unit | |
| | Philip S. Scuderi | 2153 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 14-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is not necessarily limited to being tangibly embodied. A computer-readable signal-bearing medium reads on a carrier signal, which is non-statutory. Examiner suggests removing the “signal-bearing” limitation from claim 14 and removing the “modulated carrier signal” limitation from claim 15.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7, 14-17, and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation “said establishing access rights being responsive to a hard attribute”, the meaning of which is not entirely clear. Examiner will treat the claim as best

Art Unit: 2153

understood. Examiner's best understanding is that Applicant means "said ~~establishing~~ access rights ~~being responsive to~~ comprising a hard attribute".

6. Claims 1 and 14 recite the limitation "in response to said access rights", the meaning of which is not entirely clear. Examiner will treat the claims as best understood. Examiner's best understanding is that Applicant means "~~in response~~ according to said access rights".

7. Claim 18 recites the limitations "establishing access rights of a node to said storage media responsive to said label" and "determining a node's responsibility for coordinating access to said storage media responsive to said label", the meaning of which is not entirely clear. Examiner will treat the claim as best understood. Examiner's best understanding is that Applicant means "establishing access rights of a node to said storage media ~~responsive~~ according to said label" and "determining a node's responsibility for coordinating access to said storage media ~~responsive~~ according to said label".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claim 1, 7-8, and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitmura et al. (U.S. 6,816,948, hereinafter "Kitmura").

10. With respect to claim 1, Kitmura teaches a method for safely accessing shared storage media (41) in a computing environment (figures 1-2) having two or more nodes (1-3) comprising:

- (a) establishing access rights of at least two of said nodes to said storage media (500), said access rights comprising a hard attribute of associated storage media (block ranges 502-503); and
- (b) accessing said storage media by one of said at least two of said nodes according to said access rights (column 4 lines 16-23).

11. With respect to claim 7, Kitmura teaches the method applied to claim 1, wherein the computing environment is a storage area network (abstract line 1).

12. With respect to claim 8, Kitmura teaches a computing environment comprising:
two or more nodes (1-3);
shared storage-media (41);
associated storage media (500) having a hard attribute (block ranges 502-503); and
an access manager for each of at least two of said nodes (426), said manager being responsive at least in part to said hard attribute (column 6 lines 24-33).

13. With respect to claim 14, Kitmura teaches an article (4) comprising:
a computer-readable signal-bearing medium (423);

means in the medium for accessing shared storage media (1103), said storage media having associated storage media (500) having a hard attribute (block ranges 502-503);

means in the medium for establishing access rights of at least two nodes to said storage media at least in part in response to said hard attribute (column 6 lines 24-33); and

means in the medium for managing an access request to said storage media in according to said access rights (column 4 lines 16-23).

14. With respect to claim 15, Kitmura teaches the article applied to claim 14, wherein the medium is a recordable data storage medium (423).

15. With respect to claim 16, Kitmura teaches the article applied to claim 14, wherein said managing means grants a positive request to a node responsive to confirmation of node ownership of said media cluster (column 4 lines 16-29, allowing the host access upon confirming the block addresses are available (i.e. confirming the requesting node can temporarily “own” the blocks)).

16. With respect to claim 17, Kitmura teaches the article applied to claim 14, wherein said managing means grants a positive access request to a node in a cluster responsive to confirmation of cluster ownership of said media (column 4 lines 16-29, allowing the host access upon confirming the block addresses are available (i.e. confirming the requesting node can temporarily “own” the blocks (i.e. clusters))).

Art Unit: 2153

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 2, 9, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitmura in view of Imamura et al. (U.S. 6,453,369, hereinafter "Imamura"), and further in view of Milner et al. (U.S. 2002/0166002, hereinafter "Milner").

19. With respect to claims 2 and 9, Kitmura teaches the method applied to claim 1 and the computing environment applied to claim 9. The hard attributes that Kitmura teaches are block ranges of hosts that have exclusive rights to write to storage media 41. Kitmura does not teach using a vendor, product, and serial number of the storage media as the hard attributes. Nonetheless, it was well known in the art to require a device identifier in order to access a storage medium, as evidenced by Imamura.

20. In a similar art, Imamura teaches a system that reads security attributes from an inserted storage medium and grants read/write access only if inputted security attributes, including a unique device identifier, match the security attributes read from the storage medium (figure 16 and column 12 lines 20-39).

21. Given the teachings of Imamura, it would have been obvious to one of ordinary skill in the art to require the user to supply a unique device identifier in order to access storage media 41,

Art Unit: 2153

thereby ensuring that unauthorized users could not access any secure data on the storage media (Imamura column 1 lines 46-48).

22. It was well known in the art that a device in a storage area network environment could be uniquely identified by the device's vendor ID, product ID, and serial number, as evidenced by Milner (paragraphs 0018-0020). Given the teachings of Milner, it would have been obvious to one of ordinary skill in the art to use the group consisting of the vendor ID, product ID, and serial number of disk 41 as the unique device identifier, thereby ensuring the uniqueness of the device identifier.

23. With respect to claim 18, Kitmura teaches a method for safely accessing shared storage media in a computing environment having two or more nodes comprising:

- (a) writing a label (a row in table 500);
- (b) establishing access rights of a node to said storage media according to said label (column 4 lines 16-23); and
- (c) determining a node's (node 4) responsibility for coordinating access rights to said storage media according to said label (column 4 lines 23-29).

24. Kitmura does not teach that the label is determined at least in part by a hardware identifier that includes a serial number of the storage media. Nonetheless, it was well known in the art to require a device identifier in order to access a storage medium, as evidenced by Imamura.

25. In a similar art, Imamura teaches a system that reads security attributes from an inserted storage medium and grants read/write access only if inputted security attributes, including a serial number, match the security attributes read from the storage medium (figure 16 and column 12 lines 20-39).

26. Given the teachings of Imamura, it would have been obvious to one of ordinary skill in the art to require the user to supply a serial number in order to access storage media 41, thereby ensuring that unauthorized users could not access any secure data on the storage media (Imamura column 1 lines 46-48).

27. With respect to claims 19 and 20, Kitmura-Imamura teaches the method applied to claim 18. There is no type field in the label, wherein type refers to a product type.

28. Claims 3-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitmura in view of Imamura.

29. With respect to claims 3 and 10, Kitmura teaches the method applied to claim 1 and the computing environment applied to claim 10, further comprising a node identifier field (501). The rows in table 500 read on labels. Kitmura does not teach the rows including a type field. Nonetheless, it was well known in the art to require a device identifier in order to access a storage medium, as evidenced by Imamura.

30. In a similar art, Imamura teaches a system that reads security attributes from an inserted storage medium and grants read/write access only if inputted security attributes, including a unique device identifier, match the security attributes read from the storage medium (figure 16 and column 12 lines 20-39).

31. Given the teachings of Imamura, it would have been obvious to one of ordinary skill in the art to require the user to require a unique device identifier field (i.e. a type field) in order to access

storage media 41, thereby ensuring that unauthorized users could not access any secure data on the storage media (Imamura column 1 lines 46-48).

32. With respect to claims 4 and 11, Kitmura-Imamura teaches the method applied to claim 3 and the computing environment applied to claim 10. The unique device identifier (i.e. the type field) does not indicate that the storage media is node-owned.

33. With respect to claims 5 and 12, Kitmura-Imamura teaches the method applied to claim 3 and the computing environment applied to claim 10. The hard attribute could be only field 503, instead of fields 502-503. Start block 502 identifies a memory address (i.e. a cluster). The unique device identifier (i.e. the type field) does not indicate that the storage media is cluster-owned.

34. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitmura in view of Imamura, and further in view of Forman et al. (U.S. 5,544,353, hereinafter "Forman").

35. With respect to claims 6 and 13, Kitmura-Imamura teaches the method applied to claim 3 and the computing environment applied to claim 10. Kitmura-Imamura does not teach that the label further includes an activity interval field and an activity counter field for protecting ownership of the storage media. Nonetheless, it was well known in the art to provide a timestamp and a preset interval.

36. In a similar art, Forman teaches a method of determining control of a shared resource comprising a process writing a timestamp attempting access at a preset intervals (column 2 lines 30-

53). Given the teachings of Forman, it would have been obvious to one of ordinary skill in the art to further provide the label with timestamp (i.e. an activity interval) and preset interval (i.e. activity counter) fields so other nodes can attempt access at a preset intervals and determine if read/write operations have timed out, thereby enabling nodes to reduce the length of time exclusive control over a resource is required (Forman column 2 lines 54-56).

Conclusion


37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip S. Scuderi whose telephone number is (571) 272-5865. The examiner can normally be reached on Monday-Friday 8am-5pm.

39. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

40. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PSS



Dung C. Dinh
Primary Examiner